AMENDMENTS TO THE CLAIMS:

Please cancel claim 2, without prejudice; amend claim 1, and add new claims 3 and 4 as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (currently amended): A blood flow visualizing diagnostic apparatus characterized by having:

an ultrasonic measurement unit which emits an ultrasonic signal toward a blood vessel inside a human body to receive the reflected ultrasonic signal;

an analysis processing unit which obtains a blood vessel shape and a blood flow velocity in the blood vessel by the received signal;

a simulation unit which sets computational lattices on the basis of the blood vessel shape obtained by said analysis processing unit to simulate the blood flow velocity and a pressure distribution;

a feedback unit which computes an error between the blood flow velocity obtained by said analysis processing unit and the blood flow velocity obtained by said simulation unit ~~to feed~~ and feeds back the error to a sufficiently large number of representative points which are distributed over the blood flow domain in said computational lattices of said simulation unit; and

a display unit which displays the blood flow velocity and the pressure distribution output from said simulation unit after the feedback.

Claim 2 (cancelled)

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Claim 3 (new): The blood flow visualizing diagnostic apparatus as claimed in claim 1, wherein a body force f (vector) used in the actual feedback is expressed by the following equation:

$$\mathbf{f} = -K\{(\mathbf{u}_c o \mathbf{u}_m / |\mathbf{u}_m|^2) - 1\}\ \mathbf{u}_m$$

where the vector $\mathbf{u}_c$ is $[u_o, v_c, w_c,]$, the vector u_m is $[u_m, v_m, w_m]$, and K is a gain of the feedback.

Claim 4 (new): The blood flow visualizing diagnostic apparatus as claimed in claim 1, wherein feedback is expressed according to the following equation:

$$U_w = (\Sigma B_j u_j + S_w)/ B_w + d_w(p_o - p_w) + f_w$$

wherein u is a velocity and $(\Sigma B_j u_j)$ represents a sum of six values around u_w.

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